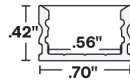




# ESSENTIALS LALO- ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed



- Shallow, low-profile fixture for surface or recessed installations
- Features high quality LED strips encapsulated in polyurethane in a rigid extrusion providing a robust fixture
- Encapsulation available in clear or translucent
- Suitable for indoor and outdoor locations (IK10)
- Three mounting options
- Features painted end caps to match extrusion finish or clear end caps to achieve seamless appearance of long runs
- Suitable for installation in the storage area of a clothes closet when specified with LEDs at 4.0 watts or less per foot per NEC regulations
- Used in applications to provide warmer CCTs as the light is dimmed
- When using DALI and DMX power supplies, LED wattage must be doubled
- Optional plastic louver accessory available in white or black for added glare control



## INFORMATION REQUIRED FOR LIGHTING SCHEDULE

1	2	3	4	5	6
PRODUCT	WATTS/ FT	CCT	RATED	EFFICIENCY	LENS
			ENC	STD	

## ADDITIONAL INFORMATION REQUIRED TO ORDER

7	8	9	10	11	12	13	14	15	16	17
WIRE INPUT/ OUTPUT	CONNECTOR / WIRE IN	CONNECTOR / WIRE OUT	INPUT END CAP	OUTPUT END CAP	WIRE COLOR	WIRE TYPE	MOUNTING	FINISH	LENGTH (IN)	EXACT/ OPTIMAL

Sample Part Number: LL3DW-6.0-24/30-ENC-STD-TL-P1-BW-BW-STD-STD-BK-CL2-SST-ST-48"-E

1	2	3	4	5	6
PRODUCT	WATTS/FT	CCT	RATED	EFFICIENCY	LENS
<b>LL3DW</b> <b>LL3DW-USA</b>  Select USA option for BAA and BABA projects.  LED engine is built with 3 wires requiring 0-10V, DMX or DALI control. Using DALI, DMX, or non QTL power supplies may double watts/ft. See following pages for compatible power supplies.	<b>1.5HE</b> 1.5W/ft HE <b>2.5HE</b> 2.5W/ft HE	<b>24/30</b> 2400K/3000K <b>27/40</b> 2700K/4000K	<b>ENC</b> IP67	<b>STD</b> Standard	<b>CL</b> Clear <b>TL</b> Translucent  For representation of LED visibility, see Diode Visibility section on following pages. For beam angles, see Photometric Performance section on following pages For optional snap-on louver ordering, see External Louver Accessory section on following pages

7	8	9
WIRE INPUT/OUTPUT	CONNECTOR/WIRE IN	CONNECTOR/WIRE OUT
<b>SINGLE (Input only)</b> <b>S1</b> End Feed <b>S2</b> Bottom Feed  <b>PASS THROUGH (Input/output)</b> <b>P1</b> End Feed <b>P2</b> Bottom Feed  For continuous mounting, consider bottom feed	<b>BW</b> Bare Wire (Standard 24") <b>CON6</b> Connector 6" <b>CON24</b> Connector 24"  <b>BW</b> Bare Wire (Standard 24") <b>CON6</b> Connector 6" <b>CON24</b> Connector 24"  BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)	<b>CLS</b> Closed End (No feed)  <b>BW</b> Bare Wire (Standard 24") <b>CON6</b> Connector 6" <b>CON24</b> Connector 24"  BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)

10	11	12	13
INPUT END CAP	OUTPUT END CAP	WIRE COLOR	WIRE TYPE
<b>STD</b> Standard <b>CL</b> Clear  STD - End cap matches fixture finish chosen Select CL for continuous runs	<b>STD</b> Standard <b>CL</b> Clear  STD - End cap matches fixture finish chosen Select CL for continuous runs	<b>WH</b> White <b>BK</b> Black	<b>CL2</b> Class 2 <b>CL2P</b> Plenum Rated  CL2P only available with bare wire leads (BW)

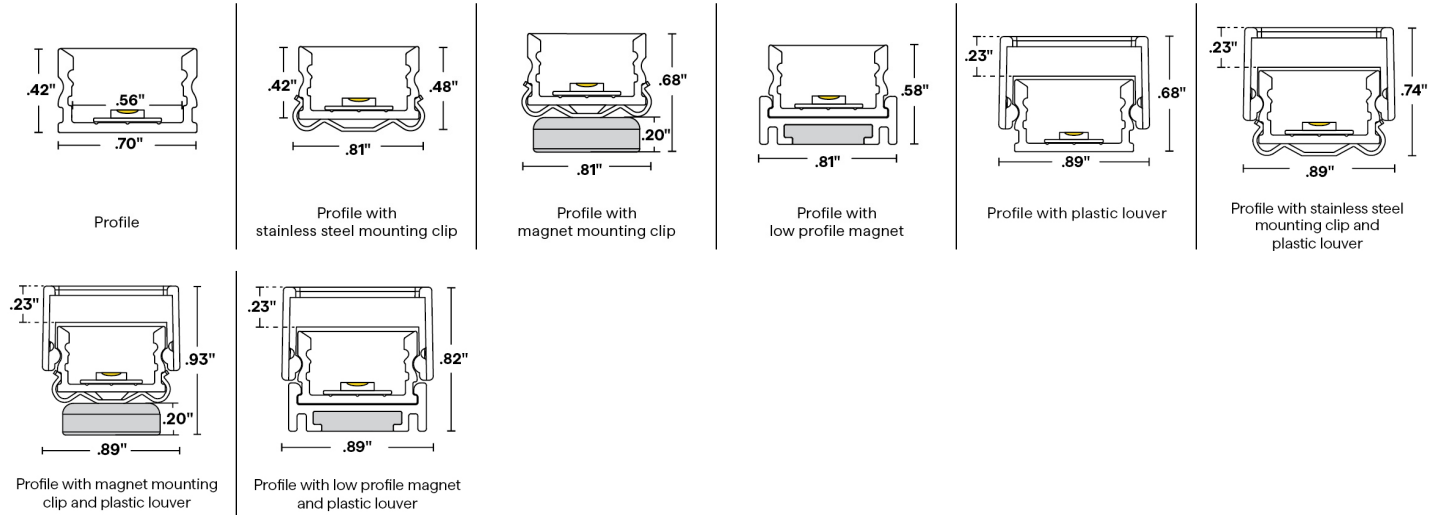
14	15	16	17
MOUNTING	FINISH	LENGTH (IN)	EXACT/OPTIMAL
<b>SST</b> Stainless Steel <b>M4</b> Low Profile Magnet <b>MG</b> Magnet	<b>ST</b> Satin <b>BK</b> Black <b>CU</b> Custom  Custom finishes require a longer lead time, consult factory	Minimum length is 12", maximum length is 98" not including end caps. Contact us for lengths under 12".	<b>O</b> Optimal Illumination <b>E</b> Exact Specified Length  Exact fixtures match the exact length you specify, but they may have dim spots at the ends. Optimal fixtures are slightly shorter than the length specified, but provide full illumination from end to end. See Exact/Optimal Fixture Length charts.



# ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

## 1 PRODUCT - DIMENSIONS

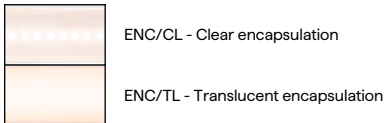


## 2 DELIVERED LUMENS

[Calculated L70 = 40000 hrs]  
Tested with LL3DW-\*\*-30-ENC-STD

	1.5HE W/FT		2.5HE W/FT	
	LM/FT	CRI	LM/FT	CRI
CL	105	98	166	98
TL	60	98	94	98

## 6 DIODE VISIBILITY



## TEMPERATURE RATINGS

	DW 1.5 HE W/FT		DW 3.0 HE W/FT		DW 2.5 HE W/FT		DW 5.0 HE W/FT	
	QTL power supply other than DALI, DMX		DALI, DMX, or non-QTL power supply		QTL power supply other than DALI, DMX		DALI, DMX, or non-QTL power supply	
	Min	Max	Min	Max	Min	Max	Min	Max
Ambient Operating Temp - Surface	-4°F	135°F	-4°F	120°F	-4°F	125°F	-4°F	105°F

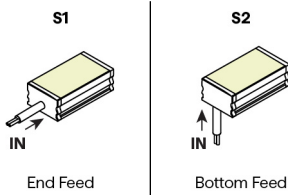


# ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

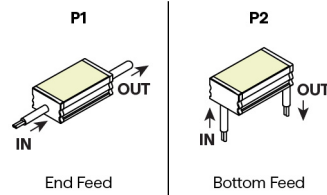
24VDC Linear Fixtures - Surface & Recessed

## 7 WIRE INPUT/OUTPUT

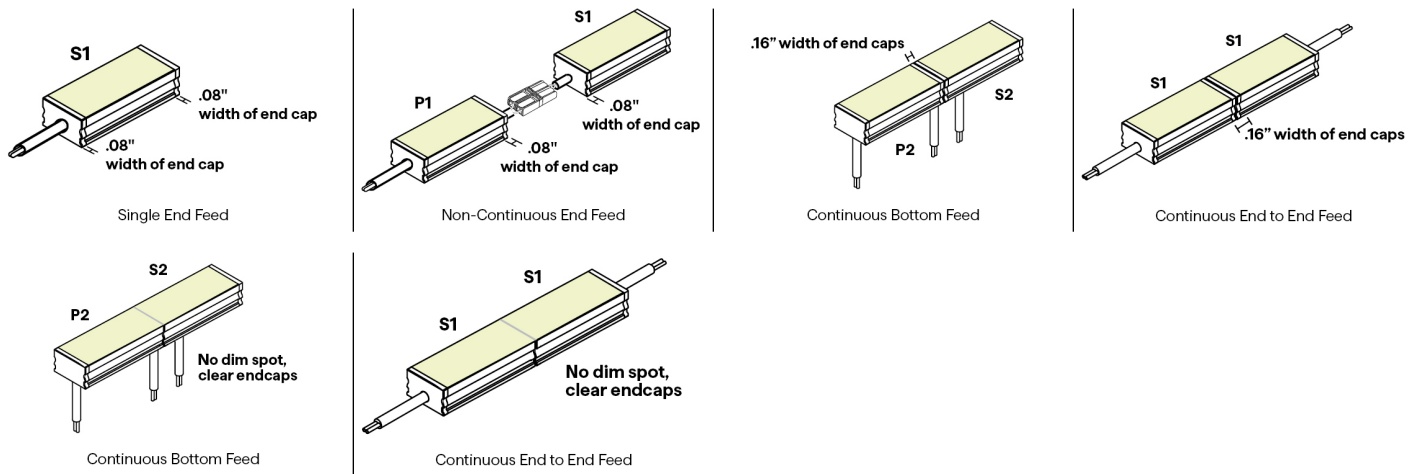
SINGLE (Input only)



PASS THROUGH (Input/Output)

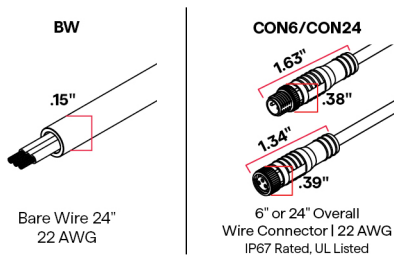


## CONFIGURATION OPTIONS

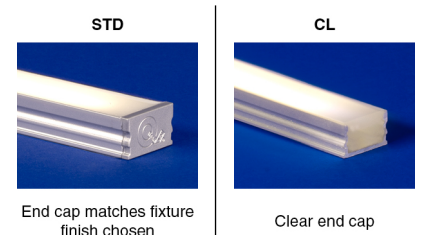


## 8 / 9 CONNECTOR/WIRE - IN/OUT

Connector/Wire In or Out not needed to specify product. Standard configuration is BW for Wire In and CLS for Wire out



## 10 / 11 END CAP - IN/OUT





# ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

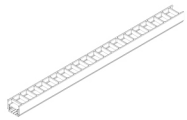
24VDC Linear Fixtures - Surface & Recessed

## EXTERNAL LOUVER ACCESSORY

### PLASTIC



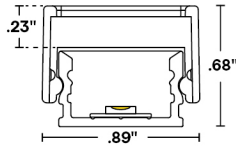
L1-XX



Lumen Multiplier

WH BK

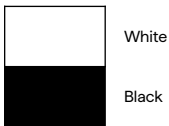
0.71 0.48



Profile with plastic louver

To order separately use  
LALO-L1-FLAT-KIT-WH or  
LALO-L1-FLAT-KIT-BK

## 12 WIRE COLOR

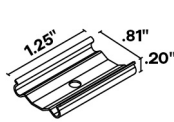


White

Black

## 14 MOUNTING

SST



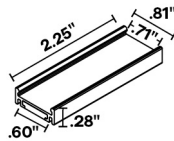
Stainless Steel Clip

2 clips provided for 4' or less; 4 clips provided for greater than 4'

To order separately use SST-01

Each clip comes with a #4 x 5/8" Flat Head screw

M4

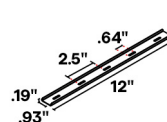


Low Profile Magnet

One M4 provided per foot.

To order separately use  
MG-04

MMA-04



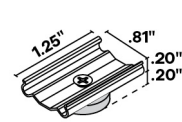
Magnet Mount  
Accessory for M4

Sold separately, to order use  
MMA-04

Each bracket comes with 2 #6 x 5/8" Flat Head SS

Required when mounting to a non-magnetic surface

MG



Magnet Clip

One MG provided per foot

To order separately use MG-01

## 15 FINISH

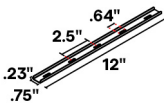


Satin

Black

Custom finishes  
require a longer lead  
time, consult factory

MMA-01



Magnet Mount  
Accessory of MG-01

Sold separately, to order use  
MMA-01

Each bracket comes with 2 #6 x 5/8" Flat Head SS

Required when mounting to a non-magnetic surface



# ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

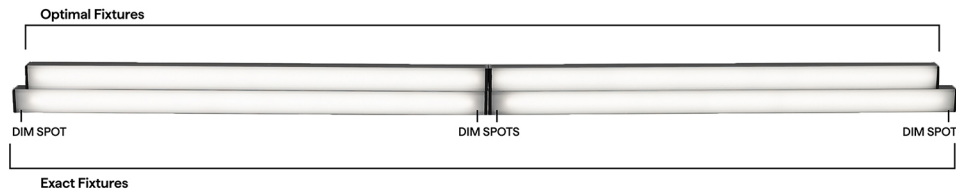
24VDC Linear Fixtures - Surface & Recessed

## 17 EXACT/OPTIMAL FIXTURE LENGTH

[E/O Length Calculator →](#)

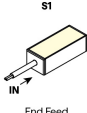
[E/O Explained →](#)

Exact fixtures are the exact length specified. Optimal fixtures' length is rounded down based on LED cut points to allow the fixture to be illuminated end to end. For runs with multiple fixtures that need to fill a specific length, it's recommended to order all optimal fixtures with an exact fixture at the end of the run.

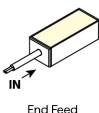
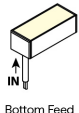
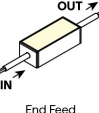
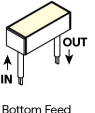


## DW-HE ENC LENGTHS BY INCH

### EXACT LENGTH

Requested Length	Potential dim spot on either end of a S1 fixture 
12"	1"
13"	0.5"
14"	1"
15"	0.5"
16"	1"
17"	0.5"
18"	1"
19"	0.5"
20"	1"
21"	0.5"
22"	1"
23"	0.5"
24"	1"
36"	1"
48"	1"
60"	1"
72"	1"
84"	1"
96"	1"

### OPTIMAL LENGTH

Requested Nominal Length	S1 & S2  		P1 & P2  	
	S1	S2	P1	P2
12"	10.51"		10.86"	
13"	12.51"		12.86"	
14"	12.51"		12.86"	
15"	14.51"		14.86"	
16"	14.51"		14.86"	
17"	16.51"		16.86"	
18"	16.51"		16.86"	
19"	18.51"		18.86"	
20"	18.51"		18.86"	
21"	20.51"		20.86"	
22"	20.51"		20.86"	
23"	22.51"		22.86"	
24"	22.51"		22.86"	
36"	34.51"		34.86"	
48"	46.51"		46.86"	
60"	58.51"		58.86"	
72"	70.51"		70.86"	
84"	82.51"		82.86"	
96"	94.51"		94.86"	



# ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

## COMPATIBLE POWER SUPPLIES

See power supplies cut sheets for more information. Data subject to change, all data has +/- 5% tolerance.

DIM TO LEVEL	INDOOR	OUTDOOR
	DW-HE Warm Dim Applications	DW-HE Warm Dim Applications
0.1%	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT8 QT-CAB-eLED+DALI-DT8-AWN QT-CAB-eLED+WD QT-CAB-eLED+WD-AWN QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT8 QTM-eLED+DALI-DT8-AWN QTM-eLED+WD QTM-eLED+WD-AWN QZ-DW	Q-SET-QZ-DW QOM-eLED+DALI-DT6 QOM-eLED+DALI-DT8 QOM-eLED+PS-DALI-DT6 QOM-eLED+PS-DALI-DT8 QOM-eLED+WD QZ-DW
1%	QZ-DALI-DT8	Q-SET+QZ-DALI-DT8 QZ-DALI-DT8
10%	Non-Dim Power Supply with WD App Dongle	

DIMMING PROTOCOL	INDOOR	OUTDOOR
	DW-HE Warm Dim Applications	DW-HE Warm Dim Applications
Phase	QZ-DW	Q-SET-QZ-DW QZ-DW
0-10V	QT-CAB-eLED+WD QT-CAB-eLED+WD-AWN QTM-eLED+WD QTM-eLED+WD-AWN QZ-DW	Q-SET-QZ-DW QOM-eLED+WD QZ-DW
Lutron Athena	QT-CAB-eLED+DALI-DT8-AWN QT-CAB-eLED+WD-AWN QTM-eLED+DALI-DT8-AWN QTM-eLED+WD-AWN	
DALI-2: DT6 LED wattage must be doubled for DW-HE products except for AWN	QT-CAB-eLED+DALI-DT6 QTM-eLED+DALI-DT6	QOM-eLED+DALI-DT6
DALI-2: DT8 LED wattage must be doubled for DW-HE products except for AWN	QT-CAB-eLED+DALI-DT8 QT-CAB-eLED+DALI-DT8-AWN QTM-eLED+DALI-DT8 QTM-eLED+DALI-DT8-AWN QZ-DALI-DT8	Q-SET+QZ-DALI-DT8 QOM-eLED+DALI-DT8 QZ-DALI-DT8
SCENE App Dimmed	Non-Dim Power Supply with WD App Dongle	

## COMPATIBLE MOUNTING ACCESSORIES

Adjustable mounting bracket - Medium

Adjustable mounting bracket - Large

Adjustable mounting bracket - XLarge

Small mounting accessory

Adjustable mounting accessory

Magnet Mount Accessory of MG-01

Magnet Mount Accessory of MG-04

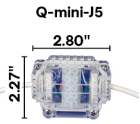
L Mounting Bracket



# ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

## COMPATIBLE WIRING ACCESSORIES



UL Listed, miniature  
junction box, DRY/DMP  
(WET rated with silicone)

## COMPATIBLE CONTROL ACCESSORIES

### SCENE APP DONGLE



Wi-Fi or Bluetooth  
Connectivity

## COMPATIBLE APPS

### NFC APP



Read and write  
DMX addresses and  
adjust voltage